LETTERS

Sirs:

As Deputy Director of the Army Research Laboratory's Vehicle Technology Directorate, I lead the propulsion-related R&D [research and development] activities jointly undertaken by the Army and NASA at the Glenn Research Center [OH]. Naturally, I was delighted when I saw the cover of the September-October 2000 issue of *Army AL&T* and eagerly anticipate a growing role of joint Army/NASA work at all three NASA S&T [science and technology] sites: Ames, Langley, and Glenn. I'm afraid that's where the rub is. In reading the Acquisition Executive's column on the inside cover, which I always do very carefully, I couldn't help noticing that in the fifth paragraph, where the collocated activities were cited, the activity at Glenn was unmentioned. I can't overemphasize how sensitive an issue that is at Glenn, both on the Army and the NASA side, as it would be at any of the collocated sites. The fact is, Army and NASA researchers at Glenn are playing a very significant role in the M&S [modeling and simulation] thrusts that comprise the new collaborative initiatives. Therefore, I feel bound to point out the omission in the column, inadvertent as I'm sure it is, and small as it may seem. For the new initiative to really get started right, it's incumbent on us, the Army, to be very sensitive to cultural issues with our new (but not really new) partners. Though Langley is lead, the M&S thrusts will ultimately span work across the other NASA centers, including Glenn, and a unity of purpose roles must be respected. For this reason, and it's really a shame, I'm reluctant to disseminate this issue—I just know all 52 Army people here at Glenn will pick up on the omission and probably share their observation with their NASA colleagues. It's a shame because other than that, it was a very fine column and issue (just as in "other than that, how was the play Mrs. Lincoln?").

Thank you for your attention to this concern.

Diligent Reader and Loyal Army Employee,
Robert C. Bill

Army AL&T Response:

Dear Mr. Bill:

Thank you for pointing out the significant M&S role being played by Army and NASA researchers at the Glenn Research Center. As you know, the Army/NASA partnership's focus on SMART [Simulation and Modeling for Acquisition, Requirements and Training] and ISE [Intelligent Synthesis Environment] initiatives is in its initial phase. Just as Mr. Goldin indicated, we must take time to build a solid foundation, set up the partnership correctly, and move out. Both agencies are "getting acquainted" and discovering the extent of potential for sharing technology and expertise.

Regarding the organizations mentioned in the Army Acquisition Executive column, there was no intent to imply that these collocated organizations were the sole extent of partnership activities occurring throughout the Army and NASA. The intent was to highlight the wide array of challenges and endeavors engaged in by the Army and NASA and describe how they are putting the SMART and ISE concepts to work for better solutions.

We look forward to hearing about Glenn Research Center's work in future issues of *Army AL&*T magazine or, perhaps, at the co-sponsored SMART Conference next April.

NEWS BRIEFS

Army Research Lab Shares Two SBIR Quality Awards

The Army Research Laboratory (ARL) is sharing two 2000 Small Business Innovative Research (SBIR) Quality Awards with industry partners Production Products Manufacturing and Sales Inc., St. Louis, MO; and Cree Inc., Durham, NC.

Working with Dr. Bruce Fink of ARL's Weapons and Materials Research Directorate, Production Products developed a capability to measure the interior rate of strain on lightweight composite vehicular armor during ballistic attack. This was accomplished through the combined use of fiber-optic recording, high-speed demodulation, ballistic testing, and composite materials. This capability will help the Army design more survivable armor for soldiers and their equipment.

With the assistance of Dr. Kenneth Jones of ARL's Sensors and Electron Devices Directorate, Cree developed the powerful High Electron Mobility Transistor (HEMT) for use in high-efficiency solid state amplifiers. HEMT has produced record power densities and X-band efficiency. This technology will benefit current and future DOD communication systems and is also commercially applicable in radar, cellular base stations, and microwave satellite communications.

Congress initiated the SBIR Program in 1982 to increase business participation in federal research and development (R&D). Army SBIR research efforts encompass three phases. Phase I is the feasibility study, which lasts up to 6 months and is funded for up to $70,000 with a $50,000 option available. Phase II is R&D, which can last up to 2 years and is funded up to $730,000. Finally, Phase III involves commercialization, which is funded by the private sector or by non-SBIR Program sources.

The annual Quality Awards Program recognizes Army SBIR Phase II projects for technical achievements, contributions to the Army, and dual-use commercialization potential. Each year, a panel of Army and industry experts selects the winning projects from more than 100 candidates. ARL has won 7 of the 38 Quality Awards presented since the program began in 1994.

For more information, contact Dave Davison at (301) 394-2302, or e-mail **ddavison@arl.mil**.

TEC/TRAC-WSMR Employees Receive Outstanding Achievement Award

Dr. Paul Krause and Louis Fatale, employees at the U.S. Army Corps of Engineers' Topographic Engineering Center (TEC), and Danny Champion, an employee at the U.S. Army Training and Doctrine Command Analysis Center-White Sands Missile Range (TRAC-WSMR), NM, are recipients of a DOD Modeling and Simulation (M&S) Outstanding Achievement Award. The TEC/TRAC-WSMR team members were presented the award by Dr. Delores Etter, Deputy Under Secretary of Defense for Science

NEWS BRIEFS

and Technology, who recognized them for their highly innovative, unique, and comprehensive study titled *The Effects of Vegetation on LOS for Dismounted Infantry*.

Prediction of line-of-sight (LOS) conditions is an essential part of understanding the battlefield. Consequently, in August 1997, the Army M&S Office provided funding for a study that would result in a better understanding of LOS in vegetated areas and enable a more accurate depiction of dismounted infantry engagement in combat simulations.

The study identifies representative worldwide vegetative density zones, verifies and validates typical LOS within each, predicts LOS performance by providing analysts a standard algorithm to yield accurate LOS in varied vegetation densities, and provides recommendations on how to improve simulation of LOS in vegetation areas for combat models.

New GPS-Based Hydrographic Navigation System

A new global positioning system (GPS)-based hydrographic navigation system has been developed that eliminates tidal uncertainties of hydrographic surveys in coastal areas. The Real-Time Kinematic GPS Tides system was developed at the U.S. Army Corps of Engineers' (COE) Topographic Engineering Center (TEC), Alexandria, VA. Initially implemented in the Saint Mary's Entrance Channel in the Jacksonville, FL, COE District, this system is the only technique approved for use in contract dredging operations in the channel. TEC is pursuing a patent for this dredging technology.

System inventor Brian Shannon is licensed both as a professional engineer and a land surveyor in the Commonwealth of Virginia. He holds a B.S. degree in civil engineering from Old Dominion University.

TEC's Brown Receives Patent

The U.S. Patent and Trademark Office recently granted a patent to Roger O. Brown, an employee at the U.S. Army Corps of Engineers' Topographic Engineering Center (TEC). Brown received the patent for his invention titled *Method for Rigorous Reshaping of Stereo Imagery with Digital Photogrammetric Workstation*. This method allows a more rigorous stereo imagery sensor model to be handled with a simpler mathematical model of aerial vertical frame photography. It can be used by a larger user group and provides better exploitation of stereoscopic data.

A physical scientist at TEC, Brown has a wide range of experience in the research, development, test, and evaluation of soft-copy mapping methods with digital imagery and terrain data.

BOOKS

PM 101: According to the Olde Curmudgeon

By Francis K. Webster Jr.,
Project Management Institute, 2000

Reviewed by LTC Kenneth H. Rose (USA, Ret.), Tidewater-Richmond Area Manager for WPI in Hampton, VA, and former member of the Army Acquisition Corps.

Among the many project management books currently available, few provide a concise, practical summary that serves both beginners and old hands. *PM 101: According to the Olde Curmudgeon* is a new addition to the literature that does just that.

PM 101 arises from a series of articles originally published in *PM Network* that have been expanded and improved throughout time. The book addresses defining and planning projects as well as essential project management skills. *PM 102*, a follow-on book due out in 2001, will address areas of scheduling, resources, cost, risk, reporting, and control.

Webster's down-to-earth style speaks directly to those who must get things done. Throughout the book, he presents examples from the Mars Pathfinder Project that show how concepts apply in the real world.

The book begins by differentiating projects from other modes of work. A discussion of modern project management follows that explains how today's methodologies differ from previous practice or other forms of management. A concise summary of the nine project management knowledge areas in the *PMBOK® Guide*, which is now recognized as a U.S. national standard, concludes this section of the book.

Webster defines three dimensions of managing a project: technical, leadership, and administrative. He addresses each fully in separate chapters. Technical skills are important, especially in smaller projects where the project manager (PM) may have a significant technical performance role. As projects become larger, responsibilities expand and leadership and administrative skills become more important.

Scope management receives complete coverage that includes initiation, planning, definition, verification, and change control. Webster suggests that a good way to deal with uncertainty is to conduct a scope review at the end of each project phase. Good scope management will result in fewer disputes, higher customer satisfaction, and reduced PM stress.

Discussion of the work breakdown structure logically leads to a comprehensive review of network diagramming that includes essential conventions for graphics, notations, and computations. Webster transitions smoothly to planning techniques, misconceptions, and best practices.

PM 101 is an introduction to basic concepts. It will not make a PM from scratch. It provides a firm foundation that will serve well in professional growth. For more experienced individuals, it provides a benchmark and a view of the forest for those who may have become too closely focused on the trees.

This book is available for $34.95 from Project Management Institute at ***http://www.pmibookstore.org****.*